



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/211,469	12/14/1998	OLEG DRAPKIN	0100.990020	9874

23418 7590 06/18/2003

VEDDER PRICE KAUFMAN & KAMMHOLZ
222 N. LASALLE STREET
CHICAGO, IL 60601

EXAMINER

LUU, AN T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 06/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/211,469

Applicant(s)

DRAPKIN ET AL.

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 March 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6-10,12-16 and 18-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1,2,4,8,10,14-16 and 18 is/are rejected.
- 7) ☒ Claim(s) 6,7,9,12,13 and 19-21 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Applicant's Amendment filed on 3-13-03 has been received and entered in the case. The rejections set forth in the previous Office Action are partially maintained as indicated below.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 2 appears to be misdescriptive because figures 2 and 3 do not show limitation "the switchable voltage supply circuit is coupled to an I/O pad supply voltage and selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage" (emphasis added). Further, limitation "selects the differential receiver supply voltage that is a higher voltage than the I/O pad supply voltage" is unclear since it is impossible to have a voltage which is higher than itself because the differential receiver supply voltage is a voltage at the I/O pad supply voltage. Examiner considers limitation "that is a higher voltage than the I/O pad supply voltage" to be "that is a higher voltage of the I/O pad supply voltage".

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 2816

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by the Setty et al. reference (U.S. Patent 6,091,300).

Setty discloses in figures 3 and 4 an apparatus comprising a single gate differential receiver (M1, M2) that receives an input voltage (Vip; Vim); and a switchable voltage supply circuit (Sa, Vdd EXTERNAL and Vdd INTERNAL), operatively coupled to the single gate differential receiver, switchable through at least one control signal (inherency by virtue of a switch) to select a differential receiver supply voltage (Vdd INTERNAL) for the single gate oxide differential receiver as required by claim 1. It is noted that Vdd INTERNAL is different from an input/output pad supply voltage (Vdd EXTERNAL terminal); and Vdd is higher than either Vip or Vim since Vip or Vim is set at common-mode voltage which is $V_{dd} - \text{ABS}(V_{gs})$, see col. 1, line 28+.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2816

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 4, 8, 10, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Setty et al reference (U.S. Patent 6,091,300).

In claim 4, Setty discloses all the claimed inventions including teaching of supply voltage to be a voltage level higher than a maximum voltage level of the input voltage (col. 1, lines 28-31 and 43-44). Setty does not disclose a reference voltage applying to a first differential input as required by claim. However, it is known in the art that differential receiving circuit is for comparing two different input signals. It can be specifically either labeled as a comparator if one of input is kept at known (reference) level so that the other input can be determined if it is higher or lower than a known level, or labeled as an amplifier if difference between two inputs is amplified for further processing. An Official Notice is taken for the above fact (see enclosed cited prior arts, PTO-948).

Claims 8 and 18 claim an application wherein the invention could be utilized. It would have been obvious for one skilled in the art to employ the invention in any environment which has practical purpose(s) since it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Ex parte Masham, 2 USPQ2d 1647 (1987). It is noted that core logic takes place of a video graphics processor as required by claim 18 and an isolation output buffer is for reshaping a signal. It would have been obvious to one skilled in the art to incorporate a buffer at the output of Setty's circuit for reshaping a signal to meet the requirements of device along the processing line. In

Art Unit: 2816

fact, any signal device (i.e., memory, graphic, video devices) can be coupled to the output of the differential receiver described above via a buffer or driver without changing the scope of Setty's invention since the differential receiver is for providing a suitable signal for further processing as needed by application.

As to claim 10, it is a combination of claims 1, 4 and 18. Therefore, it is rejected for the same reasons set forth above.

As to claims 14-16, they are rejected for reciting step/method derived from a claimed apparatus of claims 1, 4, 10 and 18 noted above.

Response to Arguments

7. Applicant's arguments filed 3-13-03 have been fully considered but they are not persuasive.

Regarding the rejection of claim 1 under 35 USC 102, Applicant has argued that "Setty requires entry into an auto-zero mode before Diff. Amp. begins amplification". Examiner respectfully disagrees because the above assertion is irrelevant with respect to the recitation of claim. Setty discloses each and every limitation required by claim.

Regarding claim 4, Applicant has argued that Setty does not teach "wherein the switchable voltage supply...a voltage higher than a maximum voltage level of the input line. Examiner respectfully disagrees with the above assertion because the switchable circuit Sa selects either Vdd INTERNAL or VDD EXTERNAL for the single gate oxide diff. receiver wherein either Vdd INTERNAL or VDD EXTERNAL voltages is higher than the max voltage level of the input line. See col. 1, lines 28+.

Art Unit: 2816

Regarding claim 8, Examiner agrees that Setty does not teach videographics processor. However, claim 8 is rejected under 35 USC 103. Limitation “generate an output signal to circuitry for” of claim 8 is seen as one of many applications that the apparatus of parent claim (claim 1) can be applicable.

Allowable Subject Matter

8. Claim 22 is allowed.

9. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus and method thereof comprising elements being configured as recited in claims. Specifically, none of the prior art teaches *a second control signal* as required in claims 6 and 12; *an input transistor* as required by claims 7 and 13; *a common current source* as required by claim 9; and *selection of either I/O pad supply or reference with respect to a maximum input signal voltage and the control signal indicates a maximum input signal voltage to the single gate oxide differential receiver to be less than the reference supply voltage , and wherein the switchable voltage supply circuit provide the I/O pad supply voltage as the differential receiver supply voltage when the control signal indicates a maximum input signal voltage to be greater than the reference supply voltage* as required by claims 19-22.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


Art Unit: 2816

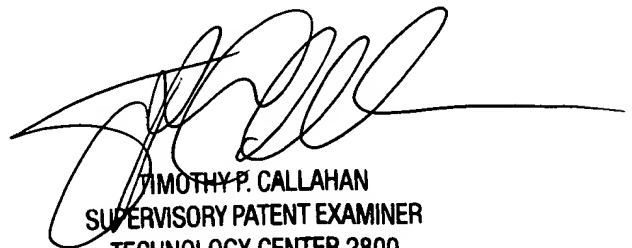
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 703-308-4922. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

An T. Luu
6-2-2003 



TIMOTHY P. CALLAHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800